

## ABSTRACT OF THE DISCLOSURE

5 A method of operating a phosphoric acid fuel cell is  
provided, in which the phosphoric acid fuel cell effects  
power generation at a high output. A power-generating cell  
is provided with an electrolyte layer comprising a matrix  
composed of basic polymer impregnated with acidic liquid  
electrolyte such as phosphoric acid. The phosphoric acid  
10 fuel cell has a fuel cell stack comprising a single unit of  
the power-generating cell or a predetermined number of the  
power-generating cells electrically connected in series to  
one another. When the phosphoric acid fuel cell is  
operated, the supply pressures of the oxygen-containing gas  
15 and the hydrogen-containing gas are set so that the pressure  
on a cathode electrode of the power-generating cell is  
higher than that of an anode electrode.